

## LOCKING SYSTEM AND FLOORING BOARD

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**Cited documents:**

WO9426999

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GB2256023

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### Abstract of WO9966151

The invention relates to a locking system for mechanical joining of floorboards (1, 1'). For horizontal mechanical joining there is a projecting portion (P) with a locking element (8) which cooperates with a locking groove (14) in an adjacent board (1'). A tongue-and-groove joint (36, 38) for vertical mechanical joining has cooperating upper abutment surfaces (43, 49) and cooperating lower abutment surfaces (45, 52) which are essentially parallel with the principal plane of the floorboards (1) and of which the lower abutment surfaces (45, 52) are positioned essentially outside the outer vertical plane (OP), i.e. displaced relative to the upper abutment surfaces. The tongue (38) is movable at an angle into the groove (36) and the locking element (8) is insertable into the locking groove (14) by mutual angular movement of the boards (1, 1') about the joint edges (4a, 4b). In the joined state, the cooperating upper abutment surfaces (43, 49) are limited horizontally inwards from the joint edge and outwards to the joint edge by an inner vertical plane (IP) and an outer vertical plane (OP), respectively. In the joined state there is between said vertical planes (IP, OP) and under the tongue (38) a space (S), which extends horizontally from the inner vertical plane (IP) and at least halfway to the outer vertical plane (OP). Such a space can also be formed during a final phase of the inwards angling.

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